

Magic Quadrant for Enterprise Architecture Tools

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Analyst(s): R. Scott Bittler

Used properly, professional-grade EA tools enable improved business outcomes by capturing, integrating, analyzing and communicating information to strategically guide decisions. This Magic Quadrant evaluates 15 vendors and their offerings in this market.

Market Definition/Description

Enterprise architects, beyond the getting-started stage, are eventually challenged with a number of problems beyond the capabilities of office productivity tools to support. These challenges include managing a large number of artifacts; capturing the complex relationships between many elements across those artifacts; conducting gap analysis, impact analysis, scenario planning and modeling; and presenting information to stakeholders. The enterprise architecture (EA) tool market has evolved to produce professional-grade tools designed to address these challenges.

Gartner redefined the EA tool market in March 2011. This tool market consists of vendors that offer software products to support the EA discipline. EA tools capture, store, structure, analyze and present information pertaining to EA, and should facilitate the implementation of business strategy focusing on business outcomes and risk mitigation. The tools should also integrate with project and portfolio management solutions as a means of ensuring the best investment mix of projects to execute business strategy.

EA tools must address the requirements of a variety of stakeholders in the organization, and contain the following minimum capabilities:

- Repository, which supports business, information, technology and solution viewpoints and their relationships. The repository must also support the enterprise context composed of environmental trends, business strategies and goals, and future-state architecture definition.
- Modeling capabilities, which support all architecture viewpoints.
- Decision analysis capabilities, such as gap analysis, impact analysis, scenario planning and system thinking.
- Presentation capabilities, which are visual and/or interactive to meet the demands of a myriad of stakeholders.

- Administration capabilities, which enable security, user management and other tasks.
- Configurability capabilities that are extensive, simple and straightforward to accomplish, while supporting multiple environments.
- Support for frameworks and standards, most commonly used while providing the flexibility to modify the framework.
- Usability, including intuitive, flexible and easy-to-learn user interfaces.

See "Market Drives Gartner to Redefine the Enterprise Architecture Tool Marketplace" for more information on the market definition.

There are other tools of interest to EA teams and occasionally used by them, although they are not primarily designed to serve the Gartner-defined EA tool marketplace (see the Additional Focus Areas for EA Tools section).

The information received by Gartner for this Magic Quadrant from vendors, end-user customers, Gartner clients who evaluated these vendors and company information databases was analyzed as prescribed in our methodology.¹ Vendor evaluation against our defined evaluation criteria (see the Evaluation Criteria section) yielded vendor placement in the Magic Quadrant graphic. In the Vendor Strengths and Cautions section of this Magic Quadrant research, we have not attempted to mention all the strengths and cautions for each vendor. Rather, the purpose of the comments in this section is to provide guidance on the most salient, distinguishing points for each vendor.

What's New: Continued Repositioning as Enterprise Business Planning Tools

Overall, it's been a "light" year as far as the degree of change in this marketplace is concerned. During the past year, some EA tool vendors have begun, or continue, to further reposition their products as broader enterprise business planning tools, in addition to being classical EA tools. This drives two primary vendor changes: in product marketing and in product output targeted at effective presentation to business leaders. This repositioning is helping vendors increase the interest and engagement of business leaders, and overcome skepticism about the term "enterprise architecture." These vendors report that they are working to expand their addressable market and increase revenue.

For users, this strengthens vendor viability by expanding their business in this otherwise smaller, niche market. At the same time, it drives improvement in features that are important for use by business stakeholders. Although these vendors still support EA concepts, principles and best practices, this repositioning may help to rebrand IT-centric architecture efforts in a more business-relevant manner.

Of course, renaming and repositioning EA will not resolve challenges of governance, business strategy, measurement, collaboration and communications. Clients need to evaluate a vendor based on its real abilities and capabilities to support their holistic EA tool needs — not based purely on market repositioning.

Key Requirements of Enterprise Architects

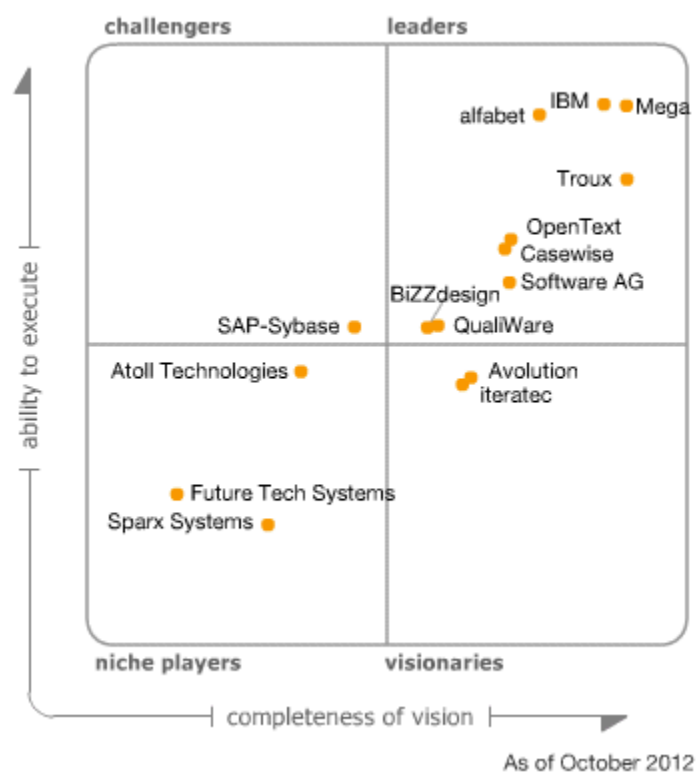
Although it is likely that EA teams start off using drawing tools, spreadsheets, and other office productivity and content management tools to document and share their EA, this approach becomes extremely difficult once artifacts appear in multiple places. For example, representations of an application might appear on a diagram depicting a server, a diagram depicting a business process and a diagram depicting the application's interfaces — all on different content management systems, spreadsheets or diagrams. Changes to the application might require updates in all locations of this data, introducing additional complexity and opportunities for inconsistency and inaccuracy.

Adoption of an EA tool, together with the discipline to use it properly and keep it up-to-date, can help address this issue of keeping all changes in sync by providing a single environment that enables changes to be reflected in the entire architecture across all viewpoints (such as business, information, technology and solutions). EA practitioners focused on contributing to business outcomes must create enabling, operational, diagnostic, actionable and measurable deliverables (see "EA Stage Planning: Frame EA Deliverables").

Enterprise architects should consider the need for their EA tool solution to link with other solutions in the enterprise. Other solutions may contain data related to areas such as portfolio and project management, life cycle management and financial information. The need for end-to-end modeling capabilities, and to equip business leaders to make key decisions, may demand such integration. A classic choice will need to be made between implementing a comprehensive "suite" tool or using multiple best-of-breed tools and integrating them.

Magic Quadrant

Figure 1. Magic Quadrant for Enterprise Architecture Tools



Source: Gartner (October 2012)

Vendor Strengths and Cautions

alfabet

For its EA tool, alfabet (www.alfabet.com) offers planningIT.

Strengths

- Despite continuing challenges in the global economy, alfabet continued to grow, posting its highest number of new planningIT licenses ever in 2011, and the best financials in its history.
- The planningIT product is used for integrated IT planning and includes functional breadth beyond EA, supporting several IT planning and control functions, as well as processes critical to the CIO.
- The vendor has a very engaged and active online user community, which brings strength to the support network, provides excellent input to product planning and creates customer loyalty.

- There is a rich metamodel "out of the box" in planningIT. This provides a firm foundation on which to structure and relate the variety of information that is of interest to enterprise architects and other users, including usage tracking by projects.

Cautions

- Although planningIT provides generally good stakeholder support, it is best for IT leaders, as the product name implies. Presentation of information to senior business stakeholders is not as well-implemented. Potential clients should bear this in mind when evaluating the product.
- The operation of the user interface is slightly unique in that keys and functions do not always follow Windows patterns. Therefore, certain types of users tend to invest more time becoming familiar with the conventions used in this particular tool in order to become proficient in using it.

Atoll Technologies

For its EA tool, Atoll Technologies (www.atollgroup.eu) offers System Architecture Management Utility (SAMU).

Strengths

- Atoll is the dominant vendor for EA tools in the Middle East. It also has regional strength in Central and Eastern Europe, and can provide strong support to these otherwise underserved markets.
- SAMU licenses are sold only in bundled form, along with limited professional services for setup and education, ensuring fast, successful implementations and higher initial satisfaction.
- SAMU focuses on a repository solution that may be tailored by the user as required. This is primarily a technical focus and, combined with the bundling of EA with ITIL and service-oriented architecture, may be considered a good fit for enterprises looking for this type of a solution.

Cautions

- Although Atoll operates in several countries and industries, potential customers in regions outside Central and Eastern Europe and the Middle East are advised to ensure that they will be able to receive the needed support level.
- SAMU has a primarily technical, repository-oriented emphasis. For comprehensive EA program support, additional tools may be required for features such as business process modeling.
- Users that prefer to acquire tool licenses without associated training or consulting services will be disappointed, because this option is not available.
- While the entirely Web-based interface can be perceived as a strength, it is only fully supported with the Internet Explorer browser, thus limiting computing platform support.

Avolution

For its EA tool, Avolution (www.avolution.com.au) offers Abacus.

Strengths

- Maximum metamodel flexibility with an open database schema is the most important feature of the Abacus product. Along with being XML-based, its tool design enables above-average ability to configure the tool as the user wants.
- Avolution's Abacus provides advanced simulation capabilities, enabling decision analysis for portfolio and life cycle management of architectures using asset timelines and road maps. More-advanced users with needs in these areas should consider this tool.
- Originally developed by a university in Australia, Avolution approaches the EA tool market from academic research roots. It is always researching new and innovative methods for analyzing and presenting data.
- Avolution entered and remains in this market with a focus specifically on tools to support enterprise architects. Several other market participants evolved into this space from adjacent disciplines, such as business process management (BPM).

Cautions

- Users report that Abacus is sometimes perceived to be almost "too configurable" or "too flexible." This can enable sophistication at the expense of usability. It also can enable users to add content in the wrong part of the model, although this can be mitigated by using role-based access or adding a forms-based, front-end extension.
- The high degree of configurability and the academic background of Avolution make it an attractive acquisition candidate to a larger competitor or other vendor wanting to enter this market.¹

BiZZdesign

For its EA tool, BiZZdesign (www.bizzdesign.com) offers Architect.

Strengths

- In the past year, the most notable product changes are the addition of business strategy and capability modeling, along with the option of hosting the repository for the EA tool in a cloud service.
- EA teams that are particularly focused on The Open Group standards for their modeling and EA activities (that is, TOGAF and ArchiMate) may want to consider BiZZdesign on their vendor shortlists.
- BiZZdesign is investing in an expansion of company offices into additional countries, including Germany and, most recently, France. Continued improvement in localized support is expected.

Cautions

- Users report concerns with license key management and limitations in version control and model reuse. The company support staff was responsive in providing short-term relief. A future version will reportedly address these issues more permanently.
- Because of strong support for The Open Group standards such as TOGAF and ArchiMate (for which training is recommended), some users can fall into the trap of rigidly following a framework and process in an academically ideal fashion. Be pragmatic and ensure that what you are doing with the tool will truly enable improved business outcomes from EA efforts.
- BiZZdesign users continue to comment positively on its flexibility, including the ease of metamodel customization. However, this flexibility is achieved through the use of a scripting language and is not graphical. Changes in the metamodel must be reapplied to the tool configuration after version upgrades. Consequently, organizations that are considering this product and need flexibility must be willing to acquire the relevant technical skills and prepare for this incremental support effort.

Casewise

For its EA tool, Casewise (www.casewise.com) offers Casewise Modeler.

Strengths

- Although it supports a wide range of vertical industries, Casewise offers focused frameworks and models for several specific industries, including government, telecommunications, utilities, healthcare and pharmaceuticals. This will suit organizations that want to leverage these capabilities to kick-start their work. For example, the company has a relationship with the TM Forum and has good support for its service provider standards. EA teams in the telecommunications industry in particular would be wise to investigate this vendor and tool.
- Building on its roots, Casewise provides solid modeling capabilities. It also provides diverse methods of modeling, including Visio support and Web-based modeling, which may appeal to large organizations requiring collaboration among diverse stakeholders.
- Good data visualization features have been added.
- The customer support team was strengthened by using staff with Casewise consulting experience.

Cautions

- Gartner is still receiving mixed responses from Casewise references on the strength of this product in certain areas, such as versioning and simulation. Potential customers should perform due diligence to ensure that the tool matches their needs by using use cases (see "Selecting EA Tools: Use Cases Are Not Optional") and a proof of concept that addresses clear business needs.

- User feedback expresses a desire for more automatic data integrity checks at manual data input time to improve systemwide data quality, thus enabling better decision making.
- Users report needs for more advanced decision support capabilities, such as simulation.

Future Tech Systems

For its EA tool, Future Tech Systems (www.future-tech.com) offers Envision.

Strengths

- The Envision tool includes an above-average capability for providing intelligent assistance to users. For example, it supports dynamic intelligent checking of logical consistency in modeling, highlighting areas of concern that guide users toward problem resolution.
- This tool can produce modeling diagrams that are above average in visual appeal and, therefore, more likely to resonate with targeted stakeholders.
- Customer comments indicate that Future Tech is responsive in supporting outstanding issues.

Cautions

- Extensive training targeted at system administrators is available, and users report being pleased with it. For typical users, plan on providing internal training within a day, delivered by those who received the advanced training.
- Although the majority of its customers are in North America, the company has worked with (primarily consulting) partners in Europe to develop and deliver local versions of many of its core models. Consulting partners are a primary channel for international sales. Potential customers need to ensure that there is adequate support available to them for this product, especially outside Future Tech's U.S. home base.
- From a small consulting organization, Future Tech started in the case tool arena and applied computer-aided design/computer-aided manufacturing (CAD/CAM)-like capabilities to software and system engineering. Although the company has evolved the product to address the functional interests of enterprise architects, its legacy has also influenced how the company operates in this marketplace — impacting its geographic, sales and marketing strategies.

IBM

For its EA tool, IBM (www-01.ibm.com/software/awdtools/systemarchitect/productline) offers the Rational System Architect family.

Strengths

- The origin of IBM's Rational System Architect product suite, originally developed by Popkin Software, was as a pioneer in the EA tool market. The product has established a substantial

presence, positive reputation and longevity in this market. Overall, Rational System Architect is a robust, feature-rich, mature product with rich configurability to meet user requirements.

- IBM is demonstrating a commitment to this product by investing in further improvements to leverage other IBM capabilities. Efforts are focused on using the Jazz technology platform, an open, scalable life cycle integration platform (see jazz.net) and integration with IBM Rational Focal Point. As a tool targeting senior executive users, Rational Focal Point is a product and portfolio management tool that complements System Architect by providing a channel to communicate selected EA-driven information views to executive stakeholders, addressing a historical weakness in System Architect.
- IBM's global coverage and support structure make it a strong contender for clients that have an international user base, or are having difficulty finding an EA tool with support for their location.

Cautions

- Although Rational System Architect has mature, rich capabilities, this creates a trade-off in regard to intuitive usability. Potential customers should be prepared for a longer and steeper learning curve, and include formal or Web-based training in their adoption plans.
- To deliver EA-based information in a manner readily consumable by senior executive stakeholders requires the use of Cognos bundled with System Architect or SA/XT, an optional add-on. Further high-level business views are provided by the integrated Rational Focal Point companion product.
- IBM continues its work on incrementally integrating System Architect with the rest of the Rational Suite of products. Users seeking a tightly integrated Rational Suite solution should ensure that the products they require are fully integrated in the manner needed to meet their use-case requirements.

iteratec

For its EA tool, iteratec (www.iteratec.com) offers iteraplan (Enterprise Edition).

Strengths

- The free Community Edition of iteraplan became open source in 2008, and is now available under an AGPL 3.0 open-source license. Thus, full source code is available for download. Software releases are managed by iteratec. Users like being able to start this way for a "sandbox" experience. When it's time to get serious, users can then upgrade to the paid-license-supported Enterprise Edition with training and consulting, or go with a software as a service (SaaS) delivery model.
- Among the vendors evaluated here, iteratec is unique in offering a solution with a software source code base that is publicly available for download (because the Community Edition is open-source). The commercially licensed and supported Enterprise Edition adds features such as MySQL and Oracle Database support, LDAP integration, users/roles/permissions support,

and data import interface support. Iteratec also sells a SaaS hosted alternative. No escrow agreements are necessary for the base (Community Edition) code; however, some customers may want to consider such agreements for the additional software unique to the Enterprise Edition.

- This vendor has created a substantial and engaged user community, which drives the evolution of the product and support.
- The iteraplan tool is 100% Web-based and uses HTML5. It is not browser-specific, and is the first EA tool that is usable as a full Web application on mobile devices such as tablets and smartphones.

Cautions

- Although it is possible to get started at no cost (not including staff time), some users report that it would have been more effective to acquire formal training earlier in their process. Potential users should beware of the possible waste of staff time that can result from pursuit of the "free" option, which may harm business perception of EA program value, because of the distraction from working with the tool.
- Users report that installation or upgrade of the premises-installed Enterprise Edition can be more complex than desired, when conducted without company assistance.
- The vendor began as a consulting company and is still largely consulting-driven, although the product side of iteratec is growing. Potential customers need to be aware of this reality and take it into consideration during the vendor evaluation process.
- So far, iteratec has provided its strongest support in German-speaking countries in Europe. Secondly, it has acceptable support for English-speaking countries around the world, strengthened recently in North America via a partner/distributor. Potential customers should determine whether acceptable regional support will be available to meet their needs.

Mega

For its EA tool, Mega (www.mega.com) offers Mega Suite.

Strengths

- Mega has a clear identification and understanding of stakeholder expectations across the entire organization. This enables it to manage information that provides business value across this spectrum of stakeholders.
- In addition to competing in the EA tool market, Mega participates in several related markets, including business process analysis (BPA); governance, risk and compliance (GRC); operational risk management; and the application analysis and design markets. This is a plus for organizations desiring a unified suite of preintegrated tools to provide for multiple stakeholder needs beyond EA.

- The Mega Advisor tool enables reasonably effective access to EA-based information for senior business stakeholders, in an interactive fashion that supports drill-down examination of supporting details.

Cautions

- On its own, the core Mega Suite EA tool has limited features to support application portfolio management (APM) as a key part of enterprise solution architecture. Users with a use-case emphasis on planning the evolution of the application portfolio should investigate the optional, new, integrated Mega APM solution (not evaluated as part of this research), which may mitigate this caution.
- Training options are limited to on-site engagements, causing users to report reduced flexibility in incrementally bringing new staff members up-to-speed on the tools. Users should evaluate Mega's plans for online training options and online community enhancements.
- The "explorer-style" hierarchy and a "tabs" feature allow for in-depth traceability of all relationships held in the repository to enable impact analysis and decision support. However, some users report that they sometimes "get lost" in the tool when exploring the EA content this way. Any users, especially non-IT users needing a visual way to navigate and interactively examine EA content, should use the Mega Advisor tool.

OpenText

For its EA tool, OpenText (www.bps.opentext.com) offers OpenText ProVision for Enterprise Architecture (formerly Metastorm).

Strengths

- While some vendors take an IT-centric, "techie" approach to EA tools, ProVision was designed with a business-centric approach. Customers will experience this perspective when interacting with the vendor staff and the tool. This is consistent with current EA discipline best practices.
- ProVision provides an EA tool that leverages the synergies among EA, BPA and BPM.
- ProVision continues its long-standing reputation for ease of use relative to some other products in this market.
- The ProVision product is focused on supporting business transformation in organizations. It includes capabilities for BPM (the execution companion discipline to the business process aspect of business architecture). Therefore, EA teams with this priority should consider OpenText as a potential vendor.

Cautions

- Users report a degree of frustration and concern with the number of software bugs and "bug fixes" that needed to be applied. Potential buyers should inquire about preventive and reactive quality control procedures to be properly prepared for the customer experience.
- Some dashboards and reporting capabilities are enabled in conjunction with third-party partner tools. Potential buyers should apply use cases and proof-of-concept demos to determine what additional products, if any, will be required to fulfill user requirements.
- The "smart business workspace," which enables social collaboration and presentation of executive dashboards, currently uses Microsoft Silverlight technology. Although quite functional on supported platforms, it is a technical constraint that limits the ability to support devices such as tablets, which are increasingly preferred by senior business stakeholders. OpenText plans conversion to HTML5 to mitigate this issue. Potential customers should investigate the timing of this change if this is a key requirement of use cases for some stakeholders.
- As a result of Metastorm being acquired by OpenText in 2011, and the associated retirement of the Metastorm brand and website, information on the EA tool is a bit buried and limited on the OpenText website.

QualiWare

For its EA tool, QualiWare (www.qualiware.com) offers QualiWare Product Suite.

Strengths

- Relative to other market participants, QualiWare has significantly improved its product positioning and marketing, product usability, and quality of visual tool output, with a positive market reaction.
- QualiWare has licensed and integrated a decision model method, adding decision analysis features to the product. Decision analysis support is of rising importance to advanced EA practitioners and is relatively weak in many EA tools.
- In addition to competing in the EA tool market, QualiWare participates in some related markets, including BPA and GRC. This, coupled with its approach to engaging employees throughout the enterprise, will appeal to organizations that want a single modeling and repository tool, and have an eye on collaborative reuse.
- QualiWare's product includes features to support stakeholders involved in investment and portfolio management. Potential customers with a focus on these areas should consider adding this tool to their shortlists.
- QualiWare has developed strong collaborative capabilities within its tool. Organizations for which this is culturally important may want to consider QualiWare on their shortlists.

Cautions

- QualiWare has enjoyed considerable success in its Nordic base region and has successfully established a presence in North America, Brazil and South Korea. However, QualiWare is still a relatively small, private company that earns most of its revenue in Europe. Customers outside these areas should ensure that there is adequate support for the product in their regions.
- There is some user-reported concern regarding responsiveness in the handling of technical product issues. QualiWare has taken steps to address this area of support. As with all software vendors, it is advisable to understand the company's proactive and reactive software quality management practices in order to be prepared.

SAP-Sybase

For its EA tool, SAP-Sybase (www.sap.com/solutions/technology/database/model-driven-architecture/index.epx) offers PowerDesigner.

Strengths

- The SAP-Sybase approach to EA sets it somewhat apart from the other vendors in its focus on data and information. This results in an in-depth approach to information modeling that is unsurpassed in the EA tool marketplace. Clients that have a need in this area would be well-advised to look at this product, especially because of its integration with other EA tools.
- SAP's development team now uses PowerDesigner internally, representing a commitment to the product by the relatively new parent company.
- This product is enjoying an increase in market adoption, driven by user organizations with an "SAP first" mandate/policy. With or without such a policy, large SAP customers should evaluate this option.
- EA tools from Software AG, Troux and alfabet all integrate with PowerDesigner's modeling and repository capabilities to gain complementary functionality over and above what they can offer individually. Current and potential customers of these tools may want to consider the robustness of PowerDesigner modeling and metadata management in addition to the functionality in these other tools.
- In addition to competing in the EA tool market, PowerDesigner participates in several modeling markets, including database design. This will appeal to organizations that want to use a single integrated modeling and metadata management solution as one of their core EA strategies — particularly those with a strong focus on in-depth information architecture. This tool can also generate logical and physical database design models for database administrators.

Cautions

- Although SAP-Sybase has strong information architecture functionality, it may not provide the rich functionality required for a mature EA team with regard to the other architecture viewpoints.

Currently, the generation of output from the tool to enable decision making is not handled natively in a user-friendly manner. Data must be exported into a spreadsheet or report writer tool and formatted as desired. Some "export to Excel" examples are provided.

- The benefits of SAP-Sybase are primarily recognized through specific configuration to meet the needs of the clients. Potential buyers of the tool must be aware of this and plan for the time and money required to achieve such configuration.
- SAP is gradually expanding its sap.com website, while gradually retiring sybase.com. Currently, information about the EA tool on sap.com is difficult to find and limited, and under-represents this product. PowerDesigner is positioned within both the "BPM" and "Integration and Database" product families. Although PowerDesigner supports those areas, as an EA tool, it is mispositioned via this key marketing channel.

Software AG

For its EA tool, Software AG (www.softwareag.com/ea) offers Aris.

Strengths

- The base Aris EA tool is complemented by the Aris MashZone product to enable information sharing with senior business stakeholders via dashboards.
- Aris is well-known for its long-standing, solid participation in the BPA market, and for its rich modeling and analysis capabilities. This makes it well-suited for organizations that want to use the same tool for EA and BPA.
- Aris can exchange information with a range of products, including several development tools, as well as some integration middleware. Aris can also exchange packaged application information with SAP's Solution Manager and SAP's Enterprise Services Repository, and exchange information with the development tools of Oracle's Fusion Middleware. This makes it attractive for organizations in which these vendors' applications play an important role. In addition, Aris has delivered a tightly integrated solution with webMethods.

Cautions

- There is currently no interface or method available to query the Aris database from an external source. All query scripts must be created and managed within the Aris environment. Thus, it is a more closed environment than some alternatives. If this level of accessibility is important, then potential customers should investigate Aris 9, in which Software AG plans to add more sophisticated ways to access repository data.
- Aris MashZone accesses data periodically exported from the EA repository, causing some inherent limitations in capability (due to lack of dynamic, bidirectional integration) with an otherwise effective dashboard tool.
- Software AG's EA solution is positioned within its "Enterprise BPM" family, along with BPA, BPM and GRC. Because EA is *not* a subset of BPM capability but rather is a much broader

discipline, we believe this product positioning undermines the perception of this offering in the market.

Sparx Systems

For its EA tool, Sparx Systems (www.sparxsystems.com) offers Enterprise Architect.

Strengths

- Sparx Systems has a unique offering in this Magic Quadrant as a vendor that provides a low-cost shareware model for immediate online download.
- Although the tool has broader EA capability, it is best known as a lower-cost tool with modeling strength. Some customers choose to leverage this strength and eventually complement it with other tools.
- This is one of the few EA tools that go deep on a technical level to include automatic software code generation from models in the user's choice of more than 10 programming languages. Potential users seeking model-driven, code-generation capabilities to speed software development of business systems should consider this tool on their evaluation shortlists.

Cautions

- This very software-development-oriented technical tool is, relative to other market participants, weaker in terms of usability. Although very capable in its chosen focus areas, screens are often difficult to read and understand.
- Potential customers need to evaluate, with use cases, whether this vendor/tool fulfills a sufficient strength in broad EA tool capabilities, or whether it is to be acquired for its modeling and code generation capabilities and used along with other tools.

Troux

For its EA tool, Troux (www.troux.com) offers Troux Enterprise Portfolio Management Suite (which includes Troux Architect).

Strengths

- In addition to the traditional EA tool market, Troux has expanded its marketing to include positioning the tool for what it calls "Enterprise Portfolio Management" in a play to expand its addressable market to other roles, including business leader roles. It is enjoying some success with this change with business and IT users.
- Troux has responded to market concerns about its complex and cumbersome pricing model, and has shifted to a simpler user-based pricing structure, which is being more favorably received by the market.

- In the past year, Troux has invested significantly in usability improvements in its products, focusing on interface design aimed at enabling broad adoption across new and diverse user groups. Other enhancements include modeling analytics and data visualizations in support of out-of-the-box cases, such as APM and technology portfolio rationalization.
- Troux has a clear identification and understanding of customer stakeholder expectations, and uses this in its marketing and deployment approach, as well as within the tool itself. This is demonstrated by the unique use of practice directors in its marketing, sales and support approach to customers.
- Troux has an advanced architecture configuration capability and an extensible repository. These features enable Troux to address many differing organizational structures and requirements, which support the organization in adapting to its changing architectural maturity.

Cautions

- The effort required to configure the tool is relatively high; however, the complexities are low. Preconfigured Troux Solutions can mitigate this dilemma, because users can acquire turnkey solutions, and can use them immediately, rather than configure the tool on their own.
- Users report concerns in dealing with an inflexible security model and time-consuming administration in this area. Prospective users should prepare a responsible, accountable, consulted and informed (RACI) model for their roles, and check with the vendor regarding support for it in advance.

Vendors Added or Dropped

We review and adjust our inclusion criteria for Magic Quadrants and MarketScopes as markets change. As a result of these adjustments, the mix of vendors in any Magic Quadrant or MarketScope may change over time. A vendor appearing in a Magic Quadrant or MarketScope one year and not the next does not necessarily indicate that we have changed our opinion of that vendor. This may be a reflection of a change in the market and, therefore, changed evaluation criteria, or a change of focus by a vendor.

Added

One new vendor has been added since the 2011 Magic Quadrant. In last year's report, iteratec was an "honorable mention." The vendor is the original author of the iteraplan open-source EA tool, and it met the inclusion criteria this year with its commercial Enterprise Edition and SaaS offerings.

Dropped

Two vendors that appeared in the 2011 Magic Quadrant, Mood International and Promis, have been dropped. On re-examination of Mood International, and considering its product functionality and market positioning compared with the EA tool marketplace (see "Market Drives Gartner to Redefine the Enterprise Architecture Tool Marketplace"), it became clear that this vendor has shifted its product focus and no longer targets the EA tool market. Promis and its EVA Netmodeler tool did not

meet the inclusion criteria being used this year because of small market share, limited geographic presence and narrow industry solutions.

Inclusion and Exclusion Criteria

Vendors included in this Magic Quadrant analysis must meet the following criteria:

- They must have tools that are positioned to address the Gartner-defined EA tool marketplace and possess the critical capabilities described in the Market Definition/Description section, and Gartner analyst opinion must be in agreement that they fit this market definition.
- They must be able to produce EA road maps that depict the planned transition from the current-state to the future-state architecture.
- They must have customer production deployments in at least two vertical industries.
- Gartner must be able to acquire survey data from at least three users/customers — not necessarily provided by the vendor (during the customer survey period executed as part of the Magic Quadrant research process) — that demonstrate that the tool meets these criteria.
- The vendor must have a substantial presence in this market.

Evaluation Criteria

Ability to Execute

Vendors are evaluated on their Ability to Execute — the ability to compete effectively, positively impacting revenue and delivering solutions to clients that create positive, win-win relationships. Here are the weighted Ability to Execute criteria:

Product/Service: This includes the core products/services offered by the vendors that compete in this market. We looked in detail at 11 aspects of a vendor's EA product suite:

1. Repository/metamodel
2. Modeling
3. Decision analysis
4. Presentation
5. Administration
6. Configurability
7. Frameworks and standards
8. Technical

- 9. Interfaces
- 10. Usability
- 11. Differentiators

Overall Viability: An assessment of the vendor's financial health, the strength of its customer base and its presence in the market. For the larger vendors (IBM, SAP-Sybase and Software AG), we also evaluated the relevant business unit and the likelihood that it will continue to invest in and sell their products.

Sales Execution/Pricing: The overall effectiveness of the sales channels and product pricing, including the cost of training and consulting.

Market Responsiveness and Track Record: The ability to respond to changes in the market as customer needs evolve and market dynamics change, recognizing the vendor's history of responsiveness.

Marketing Execution: The effectiveness of programs that communicate the organization's message to the market to increase awareness of its products, and to establish a positive identification with the product or brand and the organization among buyers.

Customer Experience: The customer's experience with the vendor and its products.

Operations: The organization's ability to meet its goals and commitments, including the vendor's technical support, training and consulting operations.

Table 1. Ability to Execute Evaluation Criteria

Evaluation Criteria	Weighting
Product/Service	High
Overall Viability (Business Unit, Financial, Strategy, Organization)	High
Sales Execution/Pricing	Standard
Market Responsiveness and Track Record	Standard
Marketing Execution	Standard
Customer Experience	High
Operations	Standard

Source: Gartner (October 2012)

Completeness of Vision

Vendors are also evaluated on their Completeness of Vision — their ability to articulate logical statements about current and future market direction, innovation, customer needs and competitive forces; how consistently they map their strategies and plans to their stated vision; and the practicality of that vision. Ultimately, vendors are rated on their understanding of market forces and their plans to exploit the market. Here are the weighted Completeness of Vision criteria:

Market Understanding: The ability to understand and accurately forecast buyers' needs in the EA environment, and to translate those needs into products and services.

Marketing Strategy: A clear, differentiated set of messages communicated consistently throughout the organization and externalized through the website, advertising, customer programs and positioning statements, consistent with the market understanding.

Sales Strategy: The strategy that uses the appropriate network of direct and indirect sales channels, coupled with marketing, service and communication affiliates that extend the scope and depth of market reach for selling products and services.

Offering (Product) Strategy: A vendor's approach to product development and delivery that emphasizes differentiation, functionality, methodology and features as they map to users' requirements.

Business Model: The soundness and logic of a vendor's underlying business proposition.

Vertical/Industry Strategy: The vendor's strategy to direct resources, skills and offerings to meet the specific needs of individual industries.

Innovation: The direct, related, complementary and synergistic allocation of resources, expertise or capital for investment, consolidation, defensive or pre-emptive purposes.

Geographic Strategy: The vendor's strategy to direct resources, skills and offerings to meet the specific needs of geographies outside its "home" region directly — or through partners, channels and subsidiaries — as appropriate for those geographies and markets.

Table 2. Completeness of Vision Evaluation Criteria

Evaluation Criteria	Weighting
Market Understanding	High
Marketing Strategy	Standard
Sales Strategy	Standard
Offering (Product) Strategy	High
Business Model	Standard
Vertical/Industry Strategy	Low
Innovation	Standard
Geographic Strategy	Low

Source: Gartner (October 2012)

Quadrant Descriptions

Leaders

Leaders provide mature offerings that meet market demand, and demonstrate the vision necessary to sustain their market position as requirements evolve. The hallmark of Leaders is that they focus on and invest in their offerings to the point that they lead the market and can affect its overall direction. As a result, Leaders can become the vendors to watch as you try to understand how new offerings might evolve.

Leaders typically possess a large, satisfied customer base (relative to the size of the market) and enjoy high visibility within the market. Their size and financial strength enable them to remain viable in a challenging economy.

Leaders typically respond to a wide market audience by supporting broad market requirements. However, they may fail to meet the specific needs of vertical markets or other more specialized segments.

In this Magic Quadrant, the Leaders have a broad range of capabilities to support EA, combined with the ability to deliver these capabilities to a diverse group of stakeholders. Although each of the Leaders has different strengths, they all provide good capabilities to assist the EA mission to translate business vision and strategy into effective enterprise change. In addition, they have a clear vision of the direction and maturation of the EA discipline.

Challengers

Challengers have a strong Ability to Execute, but may not have a plan that will maintain a strong value proposition for new customers.

Although Challengers typically have significant size and financial resources, they may lack a strong vision, innovation or overall understanding of market needs. In some cases, Challengers may offer products nearing the end of their lives that dominate a large but shrinking segment.

Challengers can become Leaders if their vision develops. Large companies may fluctuate between the Challengers and Leaders quadrants as their product cycles and market needs shift.

Visionaries

These vendors have shown a thorough understanding of the necessary attributes required in the new definition of the EA tool marketplace.

Visionaries align with Gartner's view of how a market will evolve, but they have less proven capabilities to deliver against that vision. They may reflect a competitive strategy for a smaller vendor — such as selling an innovation ahead of mainstream demand — or a larger vendor trying to break out of a rut or differentiate.

For vendors and customers, Visionaries fall into the higher-risk/higher-reward category. They often introduce new technology, services or business models, and they may need to build financial strength, service and support, as well as sales and distribution channels. Visionaries may become Challengers or Leaders, depending on whether companies accept the new technology, or whether the vendors can develop partnerships that complement their strengths. Visionaries sometimes are attractive acquisition targets for Leaders or Challengers.

Niche Players

Vendors in the Niche Players quadrant tend to have strengths in numerous aspects of EA, but may be relatively deficient in functional breadth, global presence, industry breadth or market focus. However, they may also have expertise in a particular niche market, which actually makes them the vendors of choice for that market.

Niche Players do well in a segment of a market, or they have a limited ability to innovate or outperform other vendors. This may be because they focus on a functionality or geographic region, or because they are new entrants to the market. Alternatively, they may be struggling to remain relevant in a market that is moving away from them. Niche Players may have reasonably broad functionality, but with limited implementation and support capabilities, and relatively limited customer bases. They have not yet established a strong vision for their offerings.

A Niche Player may be a perfect fit for your requirements. However, if the vendor goes against the direction of the market — even if you like what it offers — then it may be a risky choice, because its long-term viability will be threatened.

Context

The EA tool market continues to incrementally evolve as EA teams, CIOs and tool providers grapple with unique challenges. For EA teams, these challenges include the growing need to:

- Present analyses, recommendations and scenarios to multiple stakeholders that require different levels of detail and context setting
- Support their analyses and recommendations with increasingly sophisticated forms of decision analysis
- Run and test a range of possible scenarios that describe alternative investment plans

Chief architects and CIOs face the additional challenge of demonstrating the business value that EA efforts provide. Also, EA tool providers, for their part, are challenged to respond to a dynamic market that includes merger and acquisition activity, such as OpenText's acquisition of Metastorm in 2011.

Against the backdrop of these market trends, this Magic Quadrant addresses the concerns of new, intermediate and advanced EA practitioners regarding the use of tools to support their EA programs. These concerns include the selection, adoption, implementation and subsequent use of the tools to support needs that are specific to EA, and often to support complementary efforts, such as planning, compliance, BPM, data management and portfolio management. Organizations requiring integrated functionality across these areas should include integration/functional support criteria in their vendor/product evaluations.

A Magic Quadrant graphic reflects the scoring and weighting that have been performed by analysts. In the case of this Magic Quadrant, it reflects the positioning of a technology provider and is *not* primarily an analysis of its product's functionality. Of the 15 evaluation criteria, only one actually pertains to the product. The remaining 14 criteria evaluate the technology provider against the definition of the market — in this case, the EA tool market. Gartner recommends that clients:

- Review the Magic Quadrant to help narrow the list of the most likely technology providers to meet the organization's requirements.
- Use associated Gartner research on EA tools and the selection process found in the Recommended Reading section.
- Select a vendor/product using use cases and capabilities that meet their functional and nonfunctional requirements.

This Magic Quadrant describes a diverse market, but EA teams must consider that the best vendor for a given organization might be outside the Leaders quadrant. Niche problems may require niche solutions. When selecting an EA tool, organizations should consider a range of criteria and weight them according to their current and future needs. Given the global economic uncertainty, organizations should consider the viability of their preferred vendors. Additionally, organizations should ensure that there is adequate support for a given tool in their geographical region.

In 2012, our focus on reviewing products has remained on those capabilities that support and assist an EA team in its day-to-day activities. Some of these activities include modeling, future-state analysis, road mapping, presentational aids, dashboard analysis and scenario planning.

The 15 vendors in this marketplace were evaluated against Gartner's extensive research methodology.^{2,3}

When evaluating vendors, enterprise architects should pay particular attention to the key strengths and cautions analysis of each vendor, because placement on the Magic Quadrant graphic is *not* an indicator of appropriate fitness for the needs of a particular user organization, nor does it resolve the challenges of new, intermediate or advanced practitioners.

Market Overview

This Magic Quadrant is notable because there is a wide spread of vendors across the quadrants, but primarily in the Leaders and Niche Players quadrants. This is a reflection of the spread of functionality provided by vendors and their business models. We are also seeing a spread of vendors from mature and functionally rich through to open-source modeling tools. This reflects the requirements of EA tools at various stages of maturity, as described in "Critical Factors for Selecting, Purchasing, Deploying and Evolving EA Tools: What You Don't Know Can Hurt You."

New Demands for EA Tools and Vendor Responses

With the global economic upheaval continuing through the past year, the adoption of EA tools has reflected the need to provide better management, analysis and communication capabilities to demonstrate the value EA brings to an organization. The chief architect and EA team are not the only stakeholders benefiting from an EA tool. EA tool vendors have responded to this demand, and most of the vendors have reported continued revenue growth in the past year. Product revenue for vendors in this market is estimated between \$10 million and \$25 million.

Additional Focus Areas for EA Tools

Historically, many of the EA tools started with the ability to do modeling. As the use of EA tools matured in organizations, analytical techniques (enabled through modeling) were implemented to closely match the analytical needs of enterprise architects. However, the functionality of tool capabilities has continued to expand, particularly in areas that enable EA tools to support a range of associated activities with high affinity to EA — including task management, GRC, communication and collaboration — while maintaining a common repository. Several vendors mentioned in this Magic Quadrant also participate in other markets, such as BPA and GRC.

Here is a summary of the EA tool vendors that participate in other Magic Quadrants:

- Enterprise GRC platforms: Mega and Software AG (see "Magic Quadrant for Enterprise Governance, Risk and Compliance Platforms")

- BPA tools: Casewise, IBM, Mega, OpenText, Software AG and Sparx Systems (see "Magic Quadrant for Business Process Analysis Tools")
- Integrated IT portfolio analysis: alfabet (see "Magic Quadrant for Integrated IT Portfolio Analysis Applications")

Other Offerings — Open Source and Low Cost

"Disruptive innovators," such as open-source and low-cost offerings, are also a consideration — especially as the current technology providers increase their functionality. There are now a few open-source and low-cost offerings for EA tools. Some EA teams report using these options in the following ways:

- As an introduction to the aspects of managing a repository-based solution in their organizations.
- As a repository to hold and manage the EA artifacts — that is, presentations and basic models.
- As an *additional* tool that offers basic modeling capabilities to a large organization. With minimal or no licensing costs, these tools can be inexpensively deployed in an organization. The models are then exported and imported into a higher-end, mature EA tool for analysis, planning and decision making.

This disruption in the marketplace is growing, which is why Gartner released research in July 2011 that considered the impact these tools may be having on existing tool vendors (see "Repository-Based Tools and the Open-Source Threat"). Gartner projects that open-source and shareware alternatives will continue to impact the commercial EA software market.

Low-end or no-cost offerings with minimal functionality serve a void left in the market by high-end comprehensive offerings. Over time, increased complexity and features are added to high-end products, as vendors attempt to differentiate their products from competition. This differentiation comes at a cost to the vendor. Increased functionality and complexity can result in a higher learning curve for the customer. They also result in an increased price for the product. This opens up the market for new products that focus on specific areas of functionality (for example, modeling or presentation), and these new products can enter the market at a lower cost. Gartner has seen this happen with open-source products starting to enter this marketplace. For the vendor, this is referred to as "the innovator's dilemma."⁴

See the Inclusion and Exclusion Criteria section for an explanation as to why pure open-source and shareware offerings are not included in this analysis.

Acquisitions

There have been no new EA tool vendor acquisitions among the vendors covered in this Magic Quadrant since the last update in November 2011. This is the first of several years with no acquisition activity. One partial explanation is that corporate acquisition activity is light on a global level in recent years due to the weak global economy. In addition, this may be an indicator of a

stabilizing niche market. Gartner clients should speak with a Gartner analyst to find out the current status of a vendor if they are concerned about possible acquisitions, mergers or other issues.

Recommended Reading

Some documents may not be available as part of your current Gartner subscription.

"Magic Quadrants and MarketScopes: How Gartner Evaluates Vendors Within a Market"

"Market Drives Gartner to Redefine the Enterprise Architecture Tool Marketplace"

"Understanding the Eight Critical Capabilities of Enterprise Architecture Tools"

"Gartner Assessment of Enterprise Architecture Tool Capabilities"

"Selecting EA Tools: Use Cases Are Not Optional"

"Toolkit: Use Cases for EA Tools That Deliver Business Value"

"Enterprise Architecture Tools Are Positioned to Deliver Business Value"

"Critical Factors for Selecting, Purchasing, Deploying and Evolving EA Tools: What You Don't Know Can Hurt You"

"Repository-Based Tools and the Open-Source Threat"

"Beyond the Tipping Point: EA Is Strategic"

"Hype Cycle for Enterprise Architecture, 2012"

Evidence

¹ Larger vendor acquisitions of EA Tools in recent years: IBM acquired Popkin Software (System Architect), SAP acquired Sybase (PowerDesigner), OpenText acquired Metastorm (ProVision), and Software AG acquired IDS Scheer (Aris).

² Extensive research according to the Gartner Magic Quadrant research methodology was conducted on the EA tool marketplace to produce this Magic Quadrant. Information was acquired and analyzed for 15 vendors, including:

- Vendor-specific responses to all 15 evaluation criteria that define the Magic Quadrant
- Vendor-specific responses to 11 tool capabilities, including tool differentiators in this marketplace
- Vendor briefings

- Vendor presentation of its tools in support of a common use case, which addresses the use of the tool in presenting to various stakeholder groups
- At least three customer responses per vendor to a survey, including 18 questions on their use and opinions of vendor tools
- Client inquiries and comments received by Gartner during the past year regarding any of the tools and the EA tool marketplace in general

³ During the past year, Gartner conducted 165 inquiries with Gartner clients about their challenges needing EA tool support, EA tool usage and functionality. In addition, Gartner conducted more than 45 face-to-face discussions with clients and vendors. These client inquiries represented a broad cross-section of organizations of every size worldwide. Also, Gartner had more than 15 in-depth briefings with EA vendors.

⁴ "The Innovator's Dilemma: The Revolutionary Book That Will Change the Way You Do Business," by Clayton M. Christensen, Harper Paperbacks, 2003.

Evaluation Criteria Definitions

Ability to Execute

Product/Service: Core goods and services offered by the vendor that compete in/serve the defined market. This includes current product/service capabilities, quality, feature sets and skills, whether offered natively or through OEM agreements/partnerships, as defined in the market definition and detailed in the subcriteria.

Overall Viability (Business Unit, Financial, Strategy, Organization): Viability includes an assessment of the overall organization's financial health, the financial and practical success of the business unit, and the likelihood of the individual business unit to continue investing in the product, to continue offering the product and to advance the state of the art within the organization's portfolio of products.

Sales Execution/Pricing: The vendor's capabilities in all presales activities and the structure that supports them. This includes deal management, pricing and negotiation, presales support, and the overall effectiveness of the sales channel.

Market Responsiveness and Track Record: Ability to respond, change direction, be flexible and achieve competitive success as opportunities develop, competitors act, customer needs evolve and market dynamics change. This criterion also considers the vendor's history of responsiveness.

Marketing Execution: The clarity, quality, creativity and efficacy of programs designed to deliver the organization's message in order to influence the market, promote the brand and business, increase awareness of the products, and establish a positive identification with the product/brand and organization in the minds of buyers. This mind

share can be driven by a combination of publicity, promotional, thought leadership, word-of-mouth and sales activities.

Customer Experience: Relationships, products and services/programs that enable clients to be successful with the products evaluated. Specifically, this includes the ways customers receive technical support or account support. This can also include ancillary tools, customer support programs (and the quality thereof), availability of user groups and SLAs.

Operations: The ability of the organization to meet its goals and commitments. Factors include the quality of the organizational structure, such as skills, experiences, programs, systems and other vehicles that enable the organization to operate effectively and efficiently on an ongoing basis.

Completeness of Vision

Market Understanding: Ability of the vendor to understand buyers' wants and needs, and to translate those into products and services. Vendors that show the highest degree of vision listen and understand buyers' wants and needs, and can shape or enhance those with their added vision.

Marketing Strategy: A clear, differentiated set of messages consistently communicated throughout the organization and externalized through the website, advertising, customer programs and positioning statements.

Sales Strategy: The strategy for selling product that uses the appropriate network of direct and indirect sales, marketing, service and communication affiliates that extend the scope and depth of market reach, skills, expertise, technologies, services and the customer base.

Offering (Product) Strategy: The vendor's approach to product development and delivery that emphasizes differentiation, functionality, methodology and feature set as they map to current and future requirements.

Business Model: The soundness and logic of the vendor's underlying business proposition.

Vertical/Industry Strategy: The vendor's strategy to direct resources, skills and offerings to meet the specific needs of individual market segments, including verticals.

Innovation: Direct, related, complementary and synergistic layouts of resources, expertise or capital for investment, consolidation, defensive or pre-emptive purposes.

Geographic Strategy: The vendor's strategy to direct resources, skills and offerings to meet the specific needs of geographies outside the "home" or native geography, either directly or through partners, channels and subsidiaries, as appropriate for that geography and market.

GARTNER HEADQUARTERS

Corporate Headquarters

56 Top Gallant Road
Stamford, CT 06902-7700
USA
+1 203 964 0096

Regional Headquarters

AUSTRALIA
BRAZIL
JAPAN
UNITED KINGDOM

For a complete list of worldwide locations,
visit <http://www.gartner.com/technology/about.jsp>

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